

end of 1776

P R O P O S A L S

For PRINTING by SUBSCRIPTION

MINERALOGIA CORNUBIENSIS;

OR,

A GENERAL TREATISE

UPON

Minerals, Mines, and Mining,

Wherein the THEORY and NATURAL HISTORY of

STRATA, FISSURES, AND LODES,

AS TO THEIR

ORIGIN, MATTER, FORMATION,		DIRECTION, INCLINATION, INTERRUPTION,		ELEVATION, AND DEPRESSION,
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Are rationally accounted for, upon the UNIVERSAL PRINCIPLES of
NATURE and PHILOSOPHY.

With the Methods at large of

DISCOVERING, WORKING, and DRAWING the WATER
of TIN, COPPER, and LEAD MINES,

Together with the CLEANSING and METALIZING their PRODUCTS;

Shewing each particular Process for

DIGGING, RAISING, DRESSING, ASSAYING, AND SMELTING
of ORES in CORNWALL.

To which will be added,

A CORNU-BRITISH ETYMOLOGICAL EXPLANATION
of the CORNU-TECHNICAL Terms and Idioms of TINNERS:

Including those which are used among the Lead Mines and Collieries of
GREAT-BRITAIN.

By W. PRYCE, of REDRUTH, in CORNWALL.

Hi ex Terrâ saxosâ, cujus Venas sequuti

Effodiunt STANNUM, &c.

DIOD. SICUL.

Ærisque Metalla

Ostendit Venis, et STANNO plurima fluxit. Virg. Georg. II.

C O N D I T I O N S .

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To the PUBLIC.

SINCE I first gained some knowledge in the art of mining, I have many times wondered that a people so famous for the cultivation of arts and sciences, as the British are, should be, to this time, without any treatise of their own, upon this curious and important subject. Indeed it has been slightly touched upon in fugitive pieces, by several authors of reputation, who, notwithstanding, were not qualified for any thing like the present work, from their want of materials, knowledge, and insight, into the theory and practice of mines and mining: and where it has been treated of, there are such mixtures of truth and error, that 'tis very difficult, even for an *intelligent* reader, to gain any profitable knowledge of the matter. I conceive, a competent writer upon minerals, mines, &c. ought to be resident in their vicinity, and familiarly acquainted with all their different natures, properties, dispositions, and workings, from whence a clear and certain judgment is truly deducible. My situation therefore in the *center* of our Cornish mines, is a material qualifying circumstance, in favour of my work.

The past literary ignorance of our subject is the more surprizing, when we consider that the first and only commercial staple of this island, long before the Romans came hither, was the beautiful tin of Cornwall. Nay, from the remotest antiquity, I may say, we were remarkable for our singular production of that metal, and the trade we carried on with the Phenicians, in barter for commodities of less consequence in value.

Altho' the sixteenth, seventeenth, and present century, have produced men of the brightest talents for natural history, mechanicks, and philosophy, yet they never adverted to the useful science of practical mining; at the same time, many of them amused themselves with enquiries into the nature and principles of the identical objects of *deep* and *difficult discovery*. By men of sense and ingenuity, a competent knowledge might have been obtained, for essays of this kind, which future times might improve upon; therefore the public, I presume, will indulge me with candour and favour, on account of it's being *the first attempt of the kind in our language*; which, together with its *novelty and real usefulness*, I trust will gain it a cordial reception among all ranks and degrees of men.

This past inattention to a matter of such consequence to a commercial people, is full of censure, and has hitherto left it destitute of every help to be derived from *theory*, and men of letters or philosophy, so that to the present time, mining is in the direction of the illiterate vulgar, and by them transacted upon practical principles, without the knowledge or assistance which learning and cultivated talents might produce. I don't say, but that mines are well wrought and conducted with us notwithstanding; yet, I hope it will be no diminution of our skill and prudence, if I wish it was more generally known and understood as a science, among the genteel and learned part of our community. Certainly the public, in general, might hope for some good consequence from its universal reception in the republic of letters: and certain we are, no ill could happen from it's extensive diffusion. Instead of this, I may safely pronounce, that eleven twelfths of his majesty's subjects are wholly unacquainted with any part or branch of our enquiry; that by itself, it's employ, and use of materials, brings in so great a revenue to the government, and wealth to the community, out of the pregnant bowels of the earth—I hasten now to the birth and history of the work before us.

It is two and twenty years since I first attended the business and transactions of the most capital copper mine* in this county, which I was authorized to do, by holding a small part in the mine. I seldom failed of my attendance for seventeen years, during which time I made such enquiries and observations, as furnished me with a large share of the present materials. Upon the same footing, for ten years of that time, I also accompanied the transactions of another principal mine,† productive both of tin and copper. I observed, that matters incidental, *phaenomena*, and *curious desiderata*, often occurred in the working of mines, which I occasionally noted on paper. By so doing, in two or three years they increased upon my hands: I had therefore no better method to pursue, than to throw them into the form of a book, for their preservation, and my private amusement; which design I communicated to a sensible gentleman, that lived in the same house with me, who commended my resolution, and shewed me some loose sheets of his own upon the very same subject. I must say, from this time, I entertained thoughts of forming a treatise upon mining, if my capacity and value of materials might one day prove sufficient for the undertaking. Before I proceed further in my narration, I must pay a meritorious tribute to the memory of the person before mentioned; because, I found myself considerably obliged to him, for many of the rudiments of minerals and mining. This person was the late Mr. *Edward Mason*, of *Redruth*; a very good assayer, and an *honest, conscientious* man. I had frequent access to his papers, as he had to mine,

* *Dol-côtb, or Bullen Garden.*

† *Pednandrea.*

mine, by which we mutually improved upon each others notes and observations. I have likewise, in the course of the present revival, had another view of those papers by favour of his son, my friend Mr. Robert Mason, which I have used in a due degree, for the elucidation of my subjects.

A few years after, I revised my first book; which was in a mutilated unconnected condition; and cast each part of my treatise into its proper place and order, the whole, together with some further additions, making seventy-five large folio pages of close matter, and very small writing. In this state, my late learned and reverend kinsman Dr. Borlase, fellow of the Royal and Antiquarian Societies, had the perusal of it twice, and many times endeavoured to prevail over my scruples to it's publication, which, about Midsummer 1772, he effectually did, by a proposal so flattering to my interest, that I directly complied with, viz. that he would help me in the revival, correction, and amendment of my work, and enrich it with many observations and illustrations of his own. A proposal so fair and promising must necessarily excite my industry to perfect the plan; but unfortunately for me, and the public too, by the time I had revised, corrected, and made ready a fair copy of six sheets, for the doctor's further revival and amendment, it pleased the Almighty suddenly to remove my venerable friend into eternal happiness.

By this time, my intention was generally known among my friends and acquaintance, some of whom, on a perusal of my revised sheets, earnestly solicited my perseverance in the undertaking: among those, I met with the encouragement of my worthy and dignified kinsman Dr. Borlase, the present judicious Vice Warden of the Stannaries, and brother to the before mentioned gentleman. My acknowledgements are due to Mr. Soper, of St. Columb, a very good mineralist, and curious collector of fossils. I confess my gratitude to Mr. William Cookworthy, of Plymouth, for his excellent essay upon the *Virgala Divinatoria*, and his instructive memoir upon the *Art of assaying* of metals and minerals. These genuine productions form an entertaining useful part of my work, wherein the reader will discover the penetration of Mr. Cookworthy's judgment and chemical superiority. But how shall I express my affection for Mr. Francis Bennallack, my great help-mate and confidant. This person hath united, in a friendly disposition, all the knowledge of an assayer and smelter of ores; the mineralist, the complete miner, and good engineer; to whom my work is much indebted, for many pertinent hints, and improvements. I confess also my respect to Mr. John Edwards, of Hayle Copper Works, for his kind assistance, in the *modus operandi* at the large copper furnaces.

The long list of the rest of my friends, I must forbear to mention, lest I encrease the catalogue to a tiresome length; yet, I presume, the number of those respectable names already given, will serve to furnish my subscribers with a proper idea of the merit and consequence of the undertaking. It is very observable, I have made such enquiries, and taken the sense, opinion, and support of so many persons well versed in the various departments of this work, that it amounts to the joint labour of all the parties, under my signature. From the number of natural and practical facts which it contains, I may safely pronounce this treatise, with all it's faults, a valuable appendage to the library of every nobleman and gentleman of LANDED PROPERTY in the dominions of our sovereign.

Altho' our subjects are locally treated of, yet the MATTER is UNIVERSAL. Every part of Great-Britain, Ireland, and the Colonies, is more or less replete with metals, and minerals, the discovery of which, through want of lettered instructions, is entirely unknown to eleven millions of his majesty's subjects. Here I have laid down such approved methods of discovering and working of minerals, metals, and mines, that any person at a distance from mining countries, may, by application and industry, discover whether his conjectures of minerals or ores deposited in this or that place, are true or false. Nay, I have so far investigated and fathomed the depths of nature, that I have opened a new field to thousands of good practical miners, by giving them an insight into the causes, formations, and principles upon which they unphilosophically founded their practice. In the various parts of this work, the reader will discover matters of entertainment and contemplation for the Antiquarian, Historian, Naturalist, Fossilist, Mineralist, Metallist, Miner, Mechanic, Hydraulicist, Pneumatist, Engineer, Philosopher, Dieller, Leveller, Chymist, Assayer, Smelter, Lexicographer, Physician, Divine, Gentleman, Merchant, and Tradesman; in fine, I am abundantly clear, that it will prove useful and amusing to all men of speculation, and promoters of arts and sciences: but I will stay myself from declaring any further of it's properties, lest I may be taxed with prolixity, or saying too much in favour of the performance. To the candour and favour of the world I submit the thing without any more *proem*; still hoping, that the Value, Novelty, and Singularity of the enterprize, will gain it a reception among all men of Virtue, Letters, and Landed Property.

